CITY OF SAN ANTONIO

PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

TO: All Planning and Development Services Department (PDSD) Customers

SUBJECT: **INFORMATION BULLETIN 173**
Refrigerant Locking Caps

DATE: March 25, 2010

This information bulletin is intended to clarify the provisions of section 1101.10 of the 2009 *International Mechanical Code* (IMC) and section M1411.6 of the 2009 *International Residential Code* (IRC) - in particular, the requirement of the refrigerant circuit access ports located outdoors to be fitted with locking-type tamper-resistant caps.

This code requirement is new to the 2009 editions of both the IMC and IRC. These codes have been adopted at the national level and much discussion has occurred regarding this item. The following are some of the reasons as to why it was introduced into the 2009 edition of the IMC:

- Refrigerant is a lethal chemical also known as Freon and is easily accessible if these refrigerant caps are not installed in air conditioning and refrigeration units.
- It is also a result in refrigerant theft or "huffing" which refers to inhalation of Chlorofluorocarbons (CFCs/Freon).
- Huffing has been on the rise over the past recent years among pre-teens, teenagers and even adults. An analysis of 144 Texas death certificates by the Texas Commission on Alcohol and Drug Abuse involving misuse of inhalants found that the most frequently mentioned inhalant (35%) was Freon (51 deaths). Of the Freon deaths, 42 percent were students or youth with a mean age of 16.4 years
- Refrigerant is highly addictive and is considered a gateway to drug abuse.

During the last national code cycle, the provision requiring locking-type tamper-resistant caps to restrict access to refrigerants was unanimously approved at the Final Action Hearings in Minneapolis, Minnesota. As a result, this item is new and is now contained in the 2009 edition of both the IMC and 2009 IRC.

It has been brought to PDSD's attention that other Texas municipalities are not required to enforce the locking-type tamper-resistant caps requirement. The City of San Antonio is currently the only municipality under the 2009 edition of both the IMC and IRC. The cities of Dallas, Houston, Fort Worth, Austin, Corpus Christi, and El Paso are either under the 2006 edition of the IMC, 2003 edition of the IMC, 2000 edition of the UMC, or 2006 IRC. Therefore, other Texas municipalities are not facing similar enforcement concerns pertaining to these locking caps as they are not currently under the 2009 editions of the codes adopted by the City of San Antonio.

Another clarification regarding the intent of the code is location. The PDSD understands the intent of the code requirement pertains to access ports that are outdoors and in "readily accessible" locations and that the code requirement does not pertain to access ports that are outdoors and in accessible locations. For example, an access port that is on the exterior of the equipment at a residence is considered being in a readily accessible location and the requirement applies. That same piece of equipment, when located on a roof, is now considered accessible but not readily accessible and the code requirement would not apply. Likewise, access ports located within the unit itself, where access would require the removal of a panel or similar obstruction is deemed accessible but not readily

accessible and the code requirement would not apply even though the unit itself is outside the residence. The department will be enforcing the requirement for locking-type tamper-resistant caps on those access ports that are in readily accessible locations per the 2009 code editions.

The purpose of this code requirement at the national level was because the 2006 editions of the codes did not address the issue of accessibility to the lethal chemical Chlorofluorocarbons (CFCs/Freon) by untrained, unlicensed individuals, including children. By having this item now in the code, it will assist in preventing unauthorized personnel from having readily available access to refrigerant ports or refrigerant circuits. The code's intent was to only allow licensed and trained, Environmental Protection Agency (E.P.A.) certified personnel access to these refrigerant ports and service valves. The modification of the code was to have an immense positive impact on the safety and health of our citizens, and especially our youth. Its purpose was also to reduce the number of injuries associated with Freon accidents and leaks.

The intent of this new code section is as follows:

- Seal service valve ports to prevent leaks
- Prevent excessive energy usage due to refrigerant loss
- Help prevent illegal venting of refrigerant
- Help prevent accidental mixing of refrigerants (color coded caps)
- Deterrence of refrigerant theft at unsecured sites
- Help prevent access by unauthorized persons
- Reduce potential liability for inhalation induced injury or death

At the Final Action Hearings for the International Codes that will be held in Dallas, TX in May 2010, there will be several proposed changes that introduce new language to these sections of the codes. The national hearings are open to anyone interested in attending and testifying at this public hearing on the proposed code changes. This is an important event as the final action/vote that takes place in Dallas will determine the code language for the 2012 editions of codes. PDSD will be sending several staff members to these hearings in May.

The following lists the national code change proposals and further actions to be considered in Dallas on May 14:

Code	**Proposals heard in Baltimore November 6 and 7, 2009**	**Results of Hearings in Baltimore**	**Action in Dallas May 14**
IMC	Delete section 1101.10	Withdrawn by proponent before discussion	None
IRC	Delete section M1101.10	Withdrawn by proponent before discussion	None
IMC	Revise text to say: Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise protected from unauthorized access in an approved manner	Withdrawn by proponent before discussion	None
IRC	Revise text to say: Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise protected from unauthorized access in an approved manner	Approved with following modification: M1411.6 Locking access port caps. Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent	Vote May 14

		unauthorized access.	
IMC	Revise text to say: Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access.	Approved language as submitted	Vote May 14
IMC	Add new section: 1101.11.1 Existing systems. Existing refrigerant circuit access ports that are located outdoors shall be retrofitted with locking-type tamper-resistant caps whenever the refrigerant system is modified, serviced, or repaired.	Disapproved	None
IRC	Add new section: M1101.11.1 Existing systems. Existing refrigerant circuit access ports that are located outdoors shall be retrofitted with locking-type tamper-resistant caps whenever the refrigerant system is modified, serviced, or repaired.	Disapproved	None

Should you have any questions regarding this information bulletin, please contact Mr. Jesse Vasquez, HVAC Inspections Supervisor, at 210-219-8422